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LANSING



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*OU 3 - Documents /
info from
MDEQ / GP*

Ms. Shari Kolak Remedial Project Manager
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604

Dear Ms. Kolak:

SUBJECT: Review of the October 2007 Draft of the First Five-Year Review for
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

The Michigan Department of Environmental Quality (MDEQ) staff has completed the review of the October 2007 draft of the First Five-Year Review (5YR) for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site in Kalamazoo and Allegan Counties, Michigan. The following are comments that should be addressed in the draft report.

In general, the various comments fall into the following categories

✓ The operable units (OU) need to be better defined and the lack of an OU6 is confusing and should be explained for the reader's benefit. The 5YR implies that the whole site can be defined by six OUs. The report should explain that the mill properties, with the exception of Plainwell Mill, are part of the site but have no OU designation and that some mills have had actions taken at them.

NA The trigger date for OU3 needs to be defined. It is not the start of remedial action (RA), but mobilization for monitor well installation. The description of the trigger needs to be more accurately described so as not to create confusion.

NA The reason for including OU4 in the "Protectiveness Section" should be explained and all OUs should be handled consistently. At this time it is not clear in the report why OU4 is any different from OU2 as far as protectiveness is concerned. Both have Records of Decision (ROD) and neither has a completed remedial design (RD), but work has been conducted at both.

NEED TO ADDRESS Remaining issues at OU3 are not accurately discussed. Methane needs to be mitigated, not just investigated, and the groundwater path should be discussed as an ongoing route of contaminant transport that requires ongoing monitoring. The Institutional Controls (IC) that are required to make the site protective should be

identified, and the ongoing work to make sure that property issues are resolved needs to be communicated.

✓ The site chronology needs to be revised to help the reader understand the relationship between interim remedial measures (IRM) and remedial design (RD)/RA documents. At this time the chronology includes an inconsistent array of start and end dates and does not identify all of the IRM/Time Critical Removal Action (TCRA) activities that have taken place at the site. For example, a proper description will help people understand when the cap was completed at OU3, and when the King Mill removal occurred.

✓ The report needs to find a consistent way to describe the various IRM activities that have taken place (which are OU related and which are river related). The history of the site includes a complicated array of Interim Remedial Measures, RD documents, RODs, etc., all interrelated and several taking place out of sequence. Without a proper narrative the reader does not come away with an understanding of what was done, when, and why.

NEED TO ADDRESS WITH LANDFILLS
The transport of polychlorinated biphenyls (PCB) through the groundwater to the river should be identified as an ongoing mechanism in protectiveness summaries. Remedial decisions that allow for on-site disposal of contaminated material will require long-term monitoring.

NA
The text of the 5YR relies too heavily on conditions described in the Administrative Order by Consent (AOC). The AOC is a legal document that generally describes conditions at the site. It should not be the goal of the agencies to draw verbatim descriptions from this document in the production of subsequent technical documents.

The following are detailed comments that were generated during a review of the 5YR and that are the basis for the general descriptions provided above.

Comments on Executive Summary

- ✓
- OU6 is not defined in the Executive Summary of the 5YR and should be explained or noted as "Not Used" to avoid confusing the reader.
 - ✓
 - The description of the Superfund site should not be strictly limited to banks and impoundments but should be broad enough to include all areas that are known to be part of the site (for example, Ottawa and Pottawattamie Marsh).
 - NEED TO ADDRESS
• OU3 Protectiveness statement – The text should indicate the cap "minimizes the potential for" PCB material migration at concentrations above applicable criteria.
 - NEED TO ADDRESS
• When discussing the fact that PCBs are present in the groundwater at OU3, it is important to note that they have been detected in the long-term monitoring sample analyses; however, at concentrations less than our groundwater/surface water interface criteria.

- Components of the remedy should be limited to Georgia-Pacific (GP) owned or otherwise controlled property that allow for effective control of exposures.
- Methane must be mitigated. Monitoring has been ongoing and the purchase of adjacent impacted property is under consideration. All future components of methane mitigation (trenches, etc.) should be on property owned or controlled by GP.
- OU4 protectiveness – The report should clarify that only a portion of the remedy is being implemented at this time to facilitate the Plainwell TCRA.
- The trigger at OU3 for statutory review is not accurately described and should be revised.
- The report should define/describe the RA that has begun at OU4.
- The 10/21/02 date referenced in the report should be defined as it is not clear what on-site activity acted as the trigger.
- The 5YR report splits the site up into OUs. For this site, OUs are described as geographic areas. Not all the geographic areas of the site are listed as OUs and the parts of the site that fall out of the OU structure should be discussed (for example, GP Mill, King Mill, Monarch Mill, and Performance Paper Mill).
- If the OU4 protectiveness statement is to be left in, then the report should discuss all aspects of the OU that are not protective (e.g., capping, erosions, direct contact, groundwater path, ICs, etc.). The report should not limit its discussion to just issues of access.

Comments on Five-Year Review Summary Form

- It is not clear if the form is filled out from the perspective of OU3 or for the site as a whole.

OU3

- The form should indicate work elements such as methane mitigation and all components of remedy should be on property controlled by GP as they affect protectiveness.
- The form should note that at least one sign has fallen off the fence at OU3.
- Issues Section - It looks like the "Site Inspection Section" provides the details that are of interest. These details should either be transferred to this section of the report, or this section of the report should reference the Site Inspection Section for more details. Also, the report should be more specific as to the recommendations that are necessary to address the issues identified.

- UPDATE
- Issues Section – The report acknowledges that ICs are not in place, but a list of the ICs that are necessary to control exposures should be listed in the report.
 - Issues Section – The report indicates that the cause of the methane needs to be investigated. The report should be changed to reflect that the cause is understood but that the identified methane exceedances need to be mitigated.
 - Follow-up Actions – The report indicates the cap requires repair. The report should clearly identify the procedures that will be followed to ensure the repairs are adequately investigated and performed.
 - Protectiveness Statement – Because this section mentions groundwater as a migration pathway, it should also mention that PCBs have been detected in groundwater below criteria and groundwater monitoring will continue to be conducted. Also, this section should mention that methane migration issues will require continued monitoring and mitigation.

UPDATE

OU4

- If a discussion of protectiveness at OU4 is to be left in the report, then the report should discuss all of the ways in which the OU is not protective, and should not limit the discussion to access issues only.

Comments on Introduction

The introduction should be clarified to indicate the following:

- NA
- OU1, 5, 7 – No ROD and the remedy is not under construction; therefore, the five-year review cannot be completed.
- NA
- OU2 – The ROD has been filed, but the remedy is not under construction; therefore, the five-year review cannot be completed.
- ✓
- OU3 – The remedy is completed.
- ✓
- OU4 – A portion of the remedy has been implemented under an emergency action. The full remedy as identified in the ROD needs to be designed in the RD process and implemented after final approval.
- ✓
- Why is there no OU6? This fact will be confusing to the reader and should be clarified.
- ✓
- Regarding the 10/21/02 trigger date – It may be worth noting that the landfill cap and components were completed in 2000 but the final phases of the long-term monitoring network began on 10/21/02, and this date was entered into WasteLan. Verbiage in the report that describes the trigger date should be appropriately modified.
- ✓
- Change the report to indicate "The 5-Year Review recognizes six OUs including."

- ✓ • The report should recognize that OUs are geographic areas and not all portions of the site are described by the OU structure. The report should describe the areas of the site that are not covered by OU designations.
- ✓ • Last sentence of the Introduction – It should be modified to read “Although on-site construction of the RA is generally complete at OU3 and started at OU4; all other OUs are...”

Comments on Site Chronology

- ✓ • The chronology should stick to a “Date Start/Complete” or simply “Date Complete” format and should be made consistent throughout. Also, the chronology should use a consistent date format, (e.g., Day/Month/Year, Month/Year, or Year).
- ✓ • Two remedial investigation/feasibility study (RI/FS) complete dates are provided for OU4.
- ✓ • Several interim measures were conducted at the site but are not identified in the text of the report. A discussion of these activities could help clarify some confusing issues. For example, an RA completion date is given as 9/02, yet the cap was completed in 2000. An accurate interim measures chronology will help to explain what happened at the site.
- ✓ • The construction start at OU4 is given as 5/2007, yet a RD completion date is not given. It will be helpful to fully explain that the RD has not been started at OU4 with the exception of bank work being conducted as an emergency action to handle flow through the former powerhouse channel. The rest of the RD will be completed in the near future.

Comments on Background

A. Site History

- ✓ • Under “Site History,” reference is made to “other former industry operations along the Kalamazoo River” with respect to the source of PCBs. The tie to former paper recycling operations should indicate that this source of PCBs is thought to be the major contributor to the site.
- ✓ • Mill properties should be discussed as it appears as if they are being excluded.
- ✓ • This statement should be edited to read “...including the river banks and adjacent floodplains, as well...”
- ✓ • “...the Site consists of six OUs.” The report should explain the absence of OU6.
- ✓ • Regarding the mill properties – “...determination of site is where contamination comes to lie...not if it is a source to the river.”

- ✓ • "...the PRPs [potentially responsible parties] agreed to perform a RI/FS investigation for the entire site and the state would complete the human health risk assessment [HHRA] and baseline ecological risk assessment [BERA]."

B. Report Organization

- ✓ • All OUs Initial Response. - It is necessary to find a consistent way of discussing the interim measures taken at the site. For example, the King Mill action is not discussed anywhere in the report. The OU3 Initial Response does not discuss completion of the cap, which clearly came before the RD/RA. The Bryant Mill Pond (BMP) is discussed in both the OU1 and OU5 sections. The report should do a better job of explaining the history of what actions have occurred and why, and be consistent in how the information is presented.

C. Operable Units

OU1

- UPDATE ✓
- All references to the Allied "Landfill," as a generic description for the site should be removed. References to the Bryant Mill Pond removal action should be modified to indicate it was a "Time Critical Removal Action."

Initial Response

- The BMP TCRA was not completed in 1990 as indicated but was initiated in 1998 and completed in 1999. Remove references to BMP as being the most upstream. Also, all contaminated material was disposed of within the former Bryant Historic Residuals De-watering Lagoons (HRDL) and Former Residuals De-watering Lagoons (FRDL), not within a disposal cell at the landfill.
- The interim response measures conducted between 2000 and 2005 were not conducted to prevent or eliminate erosion from the landfill into the Kalamazoo River. The IRM consisted of the following elements: sheetpile along the Bryant HRDLs and FRDLs to prevent loss of the recently placed BMP removal material back into Portage Creek, capping of the Bryant HRDLs and FRDLs that received the recently placed sediment to prevent erosion and infiltration of rainwater, installation of a groundwater collection system to maintain groundwater levels within a foot of historic norms behind the newly installed sheetpile to mitigate the potential for raised groundwater levels to saturate previously unsaturated residuals.
- Last sentence in the "Remedial Status" section indicates "Since a remedy has not yet been selected for OU1, no further discussion of OU1 is contained in this 5YR..." However, OU1 is again mentioned in the OU5 section of the report. Also, it may be clearer if the report indicates that "Since a ROD has not yet been issued for OU1..."

OU2

- UPDATE
- "The maximum PCB concentration in surface residuals at the Willow Boulevard Landfill was 270 mg/kg [milligrams per kilogram] PCB and in subsurface residuals, the maximum concentration was 160 mg/kg. Surficial soil samples

were not collected at the Willow Drainageway. The maximum PCB concentration in subsurface soils at the Drainageway was 30 mg/kg. The maximum PCB concentration in surface soil at the Area South of the A-Site Berm was 14 mg/kg PCB and in subsurface soil, the maximum concentration was 330 mg/kg PCB. The maximum PCB concentration in surface sediment at the Former Olmstead Creek was 9.9 mg/kg PCB."

- Initial Response Section – Post-ROD IRM were also implemented at this OU. This summer residuals were covered and a berm was constructed to keep surface water runoff from entering Davis Creek and the Kalamazoo River.
- The GP Mill TCRA is not mentioned in the report. This may be a good location to discuss the GP Mill TCRA as waste was disposed of at OU2.
- The last sentence of the section indicates that banks have been covered in geotextile to prevent erosion. However, it should be acknowledged that a portion of the bank still remains where residuals along the river were not excavated and the bank consists of residuals and contaminated soil/sediment.
- Basis for Taking Action Section – The last paragraph should include aquatic/sediment criteria for completeness.
- Reference to Part 201 sediment criteria is incorrect and "sediment" should be deleted.
- Baseline Ecological Risk Assessment (BERA) risk range for soils is reported to be 5.5-8.1 instead of the correct 6.5-8.1 mg/kg PCB in soil.
- Last category of OU1 is "Remedial Status" and the last category for OU2 "Basis for Taking Action." The format should be consistent and the difference should be explained.

OU3

- UPDATE*
- If both the PRP-prepared Baseline Risk Assessment and MDEQ-prepared BERA are to be referenced, then the differences in the reports should be explained.
 - History of Contamination Section – The last paragraph references the landfill covering 3.2 acres; it is actually approximately 15 acres.
 - Initial Response Section – The wording of the section suggests all work listed was "pre-ROD." The timeline in the 5YR indicates that the ROD was signed in Feb 1998. As such, the sheetpile work was pre-ROD, but the excavation work, which was conducted in 1998 and 1999, was really post-ROD and pre-RD. Also, cap construction activities would be classified as "post-ROD" and are not mentioned in the report.

- Initial Response Section – Reference is made to material from “the Mill Lagoons.” The 5YR should differentiate between the lagoons associated with OU3 and other areas at the site. Material was removed from the GP mill lagoons which are part of OU3 and material from the King Mill Lagoons, although not technically part of OU3, was disposed of at OU3. A better description of the King Mill removal should be included somewhere in the 5YR.

OU4

- History of Contamination Section – Contaminated residual migration may also have occurred to the west on the adjacent property currently operated as an asphalt company.
- OU4 has both an “Initial Response” and “Basis for Taking Action” section. This does not appear to be consistent with how the other OUs are presented.

OU5

- ✓ History of Contamination Section – The last sentence of the second paragraph indicates “Today, the ongoing, uncontrolled erosion...” This sentence should be changed to read “Today, the presence of PCB-contaminated paper wastes in the Kalamazoo river system, including streambed sediments and adjacent floodplain sediments, continues to expose ecological and human receptors at unacceptable levels. A fish consumption advisory has been in place since the 1970’s to help control the most likely route of exposure to humans, eating fish.”
- ✓ Use of the Kalamazoo River for irrigation should be noted under land and resource use.
- ✓ Initial Response Section – It is not clear why the BMP TCRA is being discussed in OU5.
- ✓ The Plainwell TCRA is mentioned in both the “Initial Response” and “Remedial Status” sections. It may be best to keep the discussion of the Plainwell TCRA to the Initial Response Section as it was made clear that this is not a “Remedial Action.” If the information is moved to another section, it should be noted that the Plainwell TCRA estimates the removal of ~132,000 cubic yards and not ~150,000 as referenced in the 5YR.
- ✓ The last section has a heading of “Remedial Status” as opposed to “Initial Response” or “Basis for Taking Action.” It is not clear why the different headings are being used for the various OUs.

OU7

- OU7 has had some removal work conducted at the lagoons with no oversight. If details regarding the removal activities are available, they should be included in the report.

Comments on Remedial Actions**A. OU2**

UPDATE

- Although the consent decree (CD) for the implementation of the RD/RA has not yet been signed, the 5YR should address: (1) timeline for CD; (2) timeline for RD/RA; and (3) ICs that should be in place through the completion of the RD/RA.
- Remedy Selection Section – Again, note that a berm had to be constructed this past summer to prevent ongoing releases and residuals were covered. This should be available in report form, or talk to the On-scene Coordinator for the GP Mill TCRA.

B. OU3

UPDATE

- No mention is made of ongoing PCB detects in the groundwater monitoring network. The Remedial action performance discussion is missing.
- Remedy Implementation Section – “The MDEQ approval is pending resolution of components of the current and any future remedy modifications and property ownership issues...landfill fence line and the mitigation of methane gas above the LEL [lower explosive limit].”
- ICs Section – Again, note that one warning sign fell off and that the specific ICs that are to be put in place should be listed.

C. OU4

- Remedy Selection – ROD bullets, second bullet – Change “buffer zone” to “hydraulic barrier”; fourth bullet - Add “500-year event” to “floodplain protection.”

Comments on Five-Year Review ProcessCommunity Notification and Involvement

- The community notification could not be located on the United States Environmental Protection Agency (U.S. EPA) web site.

Document Review

- ✓ • The OU2 documents reviewed should be listed here as well and the OU4 consent decree is inappropriately listed in the OU3 documents section.

Data Review

- ADD — • Provide a copy of the Post-Closure Groundwater Report submitted to the U.S. EPA on September 10, 2007 by Pat McGuire.

Site Inspection

- ✓ • King Highway Landfill (KHL), fourth paragraph – “However, there was evidence of animals burrowing into the diversion berm.”

Interviews

- ✓ • KHL, 2nd paragraph – “In general, the MDEQ project manager...”
- ✓ • Add before the last sentence in the second paragraph – “However, the issue of components of the remedy being installed on MDOT and/or City of Kalamazoo property requires timely resolution.”

Comments on Technical Assessment**B. OU3**

- UPDATE
- Methane migration was mitigated to the west with a landfill gas cutoff trench. This needs to be discussed, as does methane migration to the south which is being monitored pending resolution of "issues" along with mitigation.
 - Mention is made that "PCBs were not detected in groundwater above the performance standard which is an indication that the cap is effective at containing the contaminated paper residuals." This should be revisited under Question C and state the following, "While PCBs in groundwater have not exceeded the performance standard, the ongoing quarterly sampling will monitor the protectiveness of the remedy and will be continued."

Comments on Issues

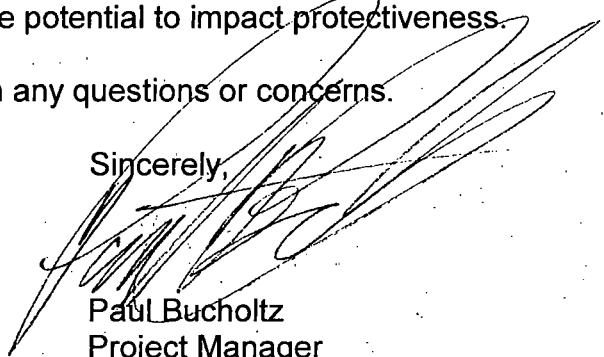
- UPDATE
- Table 2, last row - Reword statements to recognize that methane mitigation is required.
 - The MDEQ should receive a copy of the September 17, 2007 IC Report referenced for OU3.

Comment on Protectiveness Statements

- UPDATE
- The OU3 statement should be modified to reflect detections of PCBs in the groundwater at OU3 and the potential to impact protectiveness.

Please feel free to contact me with any questions or concerns.

Sincerely,



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517-373-8174

cc: Ms. Stephanie Linebaugh, U.S. EPA
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